

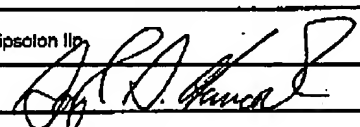
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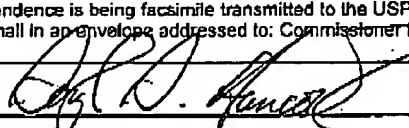
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	First Named Inventor	Douglas Phillips	
	Art Unit	3632	
	Examiner Name	Kimberly T. Wood	
Total Number of Pages in This Submission	27	Attorney Docket Number	1192-012/ddh

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**IN THE U.S. PATENT AND TRADEMARK OFFICE
BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Application of: Douglas Phillips

Filed: March 30, 2004

Application No.: 10/814,378

Examiner: Kimberly Wood

Group Art Unit: 3632

For: *Climbing Cam Position Indicator*

CORRECTED APPEAL BRIEF

(37 CFR § 41.37)

COMMISSIONER FOR PATENTS:

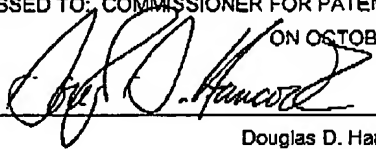
Sir:

This Corrected Appeal Brief is in furtherance of the Notice of Non-Compliant Appeal Brief mailed by the Patent Office on October 13, 2006. The brief that follows complies with the deficiencies identified in the notice: it presents an argument under a separate heading for each ground of rejection on appeal, and complies with all other formalities.

CERTIFICATE OF TRANSMISSION/MAILING

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ON OCTOBER 20, 2006



Douglas D. Hancock

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1. Real Party in Interest

The real party in interest is Metolius Mountain Products, Inc.

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2. Related Appeals and Interferences

There are no related appeals or interferences.

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3. Status of Claims

Claims 1 and 3 through 20 are rejected and are the claims on appeal.

Claim 2 has been canceled.

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4. Status of Amendments

No claim amendments have been filed subsequent to the final office action that was mailed April 19, 2006.

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5. Summary of Claimed Subject Matter

Climbing cams are one type of safety protection used by rock climbers. Although there are numerous designs for cams (as shown by the prior art cited by the Examiner in this case), almost all cams have two or more spring-loaded "cams" rotatably mounted on an axle and actuated by a trigger. When the trigger is released, the cams are driven by the springs into an expanded position. When the trigger is pulled, the cams are retracted against the tension of the springs. Cams are used by the climber pulling the trigger (to retract the cams and thus narrow the width of the device), and when in the narrowed configuration, the climber wedges the cams into cracks and crevices in rocks. When the trigger is released, the cams expand and make contact with the rocks. Given the configuration of the cams and their contact with the rocks, the device resists removal from the crack when a load is placed on the cam (i.e., in the event of a fall).

Since there are many different sizes of cracks and crevices, cams come in many different sizes. To ensure safety, the climber must choose a cam that is appropriately sized for the crack into which it will be inserted. To ensure that a cam is safely placed in the rock, the climber must first choose the correct size cam. Although a particular size cam might engage a crack in a rock, this does not mean that the placement is either safe or of good quality. Thus, for any given cam there is an expansion range in which the cam is safe. Stated another way, a cam of a given range of expansion is safe only in appropriately sized cracks.

The claimed invention defines a visual placement indicator that directly shows the climber whether the cam is appropriately sized for the crack.

Independent claim 1 is directed to a cam wherein visible placement indicia (e.g., Fig. 1, reference numbers 12, 60, 62, 64 and 66; specification at pages 7 through 10) are placed on opposed cam members (e.g., Fig. 1, reference numbers 14 and 16; specification at page 7). The placement indicia indicates the quality of cam placement in a rock (e.g., specification at pages 7 through 10). The placement indicia further indicates when cam placement is not safe (e.g., Fig. 2, reference number 60; specification at page 8).

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Independent claim 9 relates to a cam having at least one pair of opposing arcuate cam members (e.g., Fig. 1, reference numbers 14 and 16, specification at pages 7) wherein the improvement comprises indicia (e.g., Fig. 1, reference numbers 12, 60, 62, 64 and 66, specification at pages 7 through 10), which are capable of indicating cam placement quality (e.g., specification at pages 7 through 10).

Independent claim 14 calls out indicia means (e.g., Figs. 1 and 6, reference numbers 12, 60, 62, 64, 66; specification at pages 7 through 10) for providing a visual assessment of the quality of cam placement (e.g., specification at pages 7 through 10). The indicia means includes visual indicators showing unsafe cam placement (e.g., Fig. 2, reference number 60; specification at page 8).

Dependent claims 3 and 20 specify that the visible placement indicia be placed on the side surface (e.g., Fig. 1, reference numbers 15, 17; specification at page 8).

Dependent claims 4, 11, 12, 13 and 15 recite that the visible indicia comprises multiple color coded indicia (e.g., specification at pages 8 through 9).

Dependent claims 5, 6, 16 and 17 specify a graduated scale marking in which the graduations correlate to cam placement quality (e.g., Fig. 6, reference numbers 66, 66, 62, 64; specification at pages 9 through 10).

With prior art cams the only way that a climber is able to determine whether a cam is of an appropriate size for a crack is by reliance solely on the climber's experience and subjective judgment—the climber looks at the cam and its positioning in the rock, judges the appropriateness of its size and placement of the cam relative to the crack, and decides whether the placement is safe. There is no indication whatsoever other than the climber's subjective judgment. This is not always a reliable way to address a significant safety issue.

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6. Grounds of Rejection to be Reviewed on Appeal

All claims pending in the case are rejected under 35 USC § 103(a) as being unpatentable over Watts, US Patent Publication No. 2004/0035992 in view of Kensey et al, US Patent No. 5,021,059. Similarly, all claims pending in the case are rejected under 35 USC § 103(a) as being unpatentable over Jardine, US Patent No. 4,184,657 in view of Kensey et al.

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7. Argument

a. Background and Introduction

Each independent claim in the application requires among other things visible placement indicia that (a) indicates the quality of cam placement, and (b) indicates unsafe cam placement. The claimed indicia provide a direct visual indicator to the climber of the quality of the placement, and whether the placement is safe. As detailed below, none of the references cited by the Examiner describes indicia that is capable of indicating the quality of cam placement, or when placement is unsafe.

Both of the patents to Watts and Jardine describe climbing cams. Although there are several structural differences between the cams described in these patents, the structural aspects of both patents pertinent to the Examiner's position are the same. Specifically, the Examiner relies heavily upon the fact that the cams in both patents have grooves formed in the outer surfaces of the cam members (e.g., treads 411 in Watts, and the grooves visible in the figures of Jardine on cams 5), arguing in both cases that the grooved outer surfaces of the cams teach visible placement indicia.

The Kensey patent is not related to a climbing aid, but instead describes a medical instrument used to close incisions or punctures. The Examiner relies upon this patent for its disclosure of a plunger that includes color-coding so that the user can visually see how far to activate the plunger.

The essence of the Examiner's argument is distilled in the following quote from the April 19, 2006 Office action:

Watts [and Jardine] teaches a visible displacement [sic: placement] indicia (stepped gripping means on the edge of the cam members (5) [sic: 411] in contact with crack). The stepped gripping members are capable of correlating the quality of cam placement in a rock. The visible indicia (paragraph 0071) can be observed from the side surface of the cam (310 or 700). Furthermore, the more relative movement between the cams the less cross-sectional area of the cams is seen and the less color is therefore seen. The intersecting markings in the middle of the cams indicates the quality of the grip. Watts [and Jardine] discloses all of the limitations of the claimed

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invention except for the indicia indicating when cam placement is not safe.

The Examiner goes on to argue that it would have been obvious to modify Watts or Jardine to use the color coded zones of Kensey along the stepped gripping members on the edge of each cam for the purpose of indicating the degree of safety.

Appellant respectfully traverses these grounds of rejection. The MPEP, in section 2143, sets forth what is needed for establishing a *prima facie* case of obviousness for rejecting claims under 35 USC § 103. The pertinent portion of that section is reproduced here:

"To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)."

The rejection of the claims in this case fails because these basic criteria are not met.

b. The Rejection of Claims 1 and 3 – 20 as Obvious over the Combination of Watts and Kensey is Improper

I. INDEPENDENT CLAIMS 1, 9 AND 14 ARE ALLOWABLE

First and most fundamentally, with respect to independent claims 1, 9 and 14, in arguing that the Watts patent (a) teaches visible placement indicia, and (b) discloses stepped gripping members that are capable of correlating the quality of cam placement in a rock, the Examiner misconstrues the patent, what it discloses, and the purposes and function of the visible placement indicia as claimed herein. As such, the references fail to teach or suggest all of the claim limitations.

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Second, because there is no teaching or suggesting in the prior art of the claimed visible placement indicia, there can be no suggestion in the art that would lead one skilled in the art to modify the references or combine reference teachings.

Finally, there can be no reasonable expectation of success because regardless of whether the references are combined, there would be nothing that teaches or suggests the claimed visible placement indicia.

i. *The References Do not Teach all Claim Limitations*

The grooved outer surfaces used on the Watts cams are a standard structural feature used on almost all cams in order to provide a greater frictional grip between the cam and the rock. These grooves are not in any sense of the terms "visible placement indicia." As detailed in the specification and as used in the claims, the claimed visible placement indicia are placed on the cams in order to provide a visually identifiable system that correlates to a recommended placement in a rock crack (see, e.g., specification, page 7, last paragraph). The indicia are intended to give the climber a simple, direct manner in which to visually assess the quality of cam placement, so that the climber may easily visual verify and confirm that the selected cam device 10 is of the correct size for a given rock crack, and that the cam device is correctly placed.

The grooved surfaces of the Watts cams are incapable of meeting the limitation recited in claim 1 of "visible placement indicia", in claim 9 of "indicia on each of said cam members" and in claim 14 of "indicia means" because there is no those structure on the Watts cams that provides any correlation between cam placement and the quality of the placement (claims 1 and 14), or the safety of the placement (claim 9).

The inability of Watts' grooves to indicate in any manner to the quality of cam placement in a rock is striking. Each of the independent claims requires that the indicia indicates the quality of cam placement. The Examiner argues that "the stepped gripping members [of Watts] are capable of correlating the quality of cam placement in a rock." Applicant disagrees. Claims 1 and 9 require that the indicia "indicates" cam placement quality. Claim 14 requires that the indicia

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means provide for a visual assessment of quality of the placement. The word "indicates" is defined in the Merriam-Webster Online dictionary as "to point out or point to; to be a sign, symptom, or index of; and to state or express briefly." The word "assessment" is defined in the same dictionary as "to determine the importance, size or value of." The use of "indicates" in claims 1 and 9 and "assessment" in claim 14 thus requires some direct and positive correlation between the position of the cam in a crack as shown by the placement indicia, and the quality of the placement.

The grooves in Watts' cams do not and cannot make this positive correlation. If, as the Examiner argues, the Watts cams were capable of correlating quality, one might ask where along the curvature of the cams is the line between good quality placement and bad? Would it be at the first groove? The third groove? The tenth groove? There is of course no answer to these questions because (a) the grooves do not and were never meant to correlate to placement quality, and (b) the inventors named in these patents never contemplated any device that would indicate placement quality. Insofar as the appearance of the gripping surfaces of the Watts cams, there is no difference whatsoever between a cam in a fully extended position (as in Jardine's Fig. 4), and a fully retracted cam placement. The climber using a Watts cam must rely solely on experience and subjective judgment to determine the quality of the placement and whether it is safe. The claimed invention provides a visual verification system that supplements the climber's experience and judgment.

The Examiner further argues that Watts' gripping surfaces are visible from the side surface. That is true to a degree, depending upon the crack into which the cam is inserted, but no matter what the position of the cams relative to the rock surfaces, there is nothing on the prior art cams that in any way provides an indication of the quality of the placement in the rock. The "quality" of cam placement is described throughout the specification of the present invention; in a nutshell, the quality of the cam placement relates to the appropriateness of a specific cam for use in a specific crack. The ability of the claimed visible

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placement indicia to correlate to cam placement quality allows the climber to quickly assess whether the selected cam is of an appropriate size.

ii. There is No Motivation to Combine the References

Each of independent claims 1, 9 and 14 also requires that the indicia is capable of indicating unsafe placement quality. The Examiner cites the Kensey patent in arguing that it would have been obvious to use Kensey's teaching of a color coded plunger to indicate when cam placement is unsafe. While Kensey is an example of a tool that uses a color-coded safety indicator system, it does not provide any suggestion or motivation that would lead one of ordinary skill in the art to combine the references as suggested by the Examiner. Applicant does not disagree with the Examiner's position that the color red is associated with danger, yellow with caution, and green with safety; the specification states this position as well (see, e.g., specification, page 8, second paragraph). However, there is a huge gap between this general statement, Kensey's use of a color system, and any suggestion to provide an indicia system on a cam as claimed.

The Watts application does address safety, but does not do so in connection in any manner related to a visual system that indicates placement quality or safety. Neither Watts nor Kensey therefore provides any suggestion or motivation that would lead one skilled in the art to develop a visual placement system that allows the climber to visually verify the quality and safety of placement. While Kensey does disclose a color coding system, even if one were to borrow Kensey's color coding system and try to apply it to Watts' cams, the claimed invention could not be derived because there are no indicia indicating quality. As noted, Watts says nothing about what portion of the cam would be safe and what would portion be unsafe.

There is nothing in Watts and Kensey that provides any motivation that would lead one skilled in the art to which the invention pertains to make the combination. There must be something in the cited references that suggests the desirability of the claimed invention; the suggestion cannot be derived from the specification of the application. Although Kensey does teach a safety marking system, applicant does not argue that this element is new. Instead, there is

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simply no suggestion of the desirability of using a safety marking system in a climbing cam.

Even where two references may be amenable to being combined for purposes of making a rejection under § 103, an obviousness rejection cannot be sustained absent a suggestion in the prior art of the desirability of the combination. *See, e.g., In re Mills*, 916 F.2d 680 (Fed. Cir. 1990). In this case even if Watts or Jardine and Kensey are combined, there is no suggestion in the references that the invention defined in the independent claims would be desirable.

iii. There is No Reasonable Expectation of Success

There is no reasonable expectation that the invention defined in independent claims 1, 9 and 14 would be successful from the combination of Watts with Kensey. As noted above, Watts does not disclose or suggest the claimed placement indicia. As such, even when the references are combined there are claim limitations that are missing, and on this basis there can be no expectation of success.

Appellant submits that for the reasons discussed above, the criteria set forth above for establishing a *prima facie* case of obviousness under 35 USC § 103 have not been met with respect to the independent claims and, therefore, the rejection of claims 1, 9 and 14 over the combination of Watts and Kensey, and the claims depending therefrom should be reversed.

II. THE DEPENDENT CLAIMS ARE ALLOWABLE

In addition to the dependent claims being allowable because they depend from allowable base claims, several dependent claims are allowable because they include limitations not taught or suggested by the prior art.

Claims 3 and 20 require that the visible placement indicia be placed on a side surface of the cams. The Examiner argues that the grooves of Watts are visible from the side. While Appellant points out that in many if not most instances where the Watts cams are actually placed in rocks the grooves would not be visible, the grooves do not meet the limitation of indicia placed on a side surface.

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Claims 4, 11, 12, 13 and 15 recite that the visible indicia comprises multiple color coded indicia. These claims are not obvious over the combination cited by the Examiner. Although Kensey describes color-coding schema for a medical instrument, it does not suggest the claimed multi-colored indicia correlating to quality of cam placement.

Claims 5, 6, 16 and 17 each require a graduated scale marking in which the graduations correlate to cam placement quality. There is nothing in any reference cited by the Examiner that shows a graduated scale at all.

As with the other claims, claims 7, 8, 12, 13 and 18-20 are rejected as obvious over Watts with Kensey. For the reasons noted above, none of the references teach or suggest the color coding systems called out in these claims. Claims 8, 13 and 19 specify that a colored zone in the multi-color marking system correlates to a predetermined portion of the rock-contacting surface of the cam. The references do not suggest or teach such a claim.

c. The Rejection of Claims 1 and 3 – 20 as Obvious over the Combination of Jardine and Kensey is Improper

The argument in this section c that follows substantially repeats the argument in section b above with respect to the Watts and Kensey patents. The reason for repeating the argument here is that the Examiner required separate argument under separate headings for each ground of rejection in order to conform precisely with PTO rules for brief structure. The panel will readily see below that Applicant's arguments in respect of why the claims are allowable over Watts and Kensey are essentially identical to the arguments in respect of why the claims are allowable over Jardine and Kensey. Indeed, review of those patents readily illustrates that they are essentially identical insofar as their relevance to the claimed invention. This is further illustrated by the fact that the Examiner's arguments in the April 19, 2006 action (which is appealed here) justifying the rejections over Watts and Kensey are essentially identical to the arguments justifying the rejections over Jardine and Kensey. Again, as far as their relevance to the invention claimed in this application, Watts and Jardine are essentially identical.

I. INDEPENDENT CLAIMS 1, 9 AND 14 ARE ALLOWABLE

With respect to independent claims 1, 9 and 14, in arguing that the Jardine patent (a) teaches visible placement indicia, and (b) discloses stepped gripping members that are capable of correlating the quality of cam placement in a rock, the Examiner misconstrues the patent, what it discloses, and the purposes and function of the visible placement indicia as claimed herein.

Because there is no teaching or suggesting in the prior art of the claimed visible placement indicia, there can be no suggestion in the art that would lead one skilled in the art to modify the references or combine reference teachings.

Finally, there can be no reasonable expectation of success because regardless of whether the references are combined, there would be nothing that teaches or suggests the claimed visible placement indicia.

i. The References Do not Teach all Claim Limitations

The grooved outer surfaces used on the Jardine cams are a standard structural feature used on almost all cams in order to provide a greater frictional grip between the cam and the rock. These grooves are not in any sense of the terms "visible placement indicia." As detailed in the specification and as used in the claims, the claimed visible placement indicia are placed on the cams in order to provide a visually identifiable system that correlates to a recommended placement in a rock crack (see, e.g., specification, page 7, last paragraph). The indicia are intended to give the climber a simple, direct manner in which to visually assess the quality of cam placement, so that the climber may easily visual verify and confirm that the selected cam device 10 is of the correct size for a given rock crack, and that the cam device is correctly placed.

The grooved surfaces of the Jardine cams are incapable of meeting the limitation recited in claim 1 of "visible placement indicia", in claim 9 of "indicia on each of said cam members" and in claim 14 of "indicia means" because there is no those structure on the Jardine cams that provides any correlation between cam placement and the quality of the placement (claims 1 and 14), or the safety of the placement (claim 9).

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The inability of Jardine's grooves to indicate in any manner to the quality of cam placement in a rock is plain. Each of the independent claims requires that the indicia indicates the quality of cam placement. The Examiner argues that "the stepped gripping members [of Jardine] are capable of correlating the quality of cam placement in a rock." Applicant disagrees. Claims 1 and 9 require that the indicia "indicates" cam placement quality. Claim 14 requires that the indicia means provide for a visual assessment of quality of the placement. The word "indicates" is defined in the Merriam-Webster Online dictionary as "to point out or point to; to be a sign, symptom, or index of; and to state or express briefly." The word "assessment" is defined in the same dictionary as "to determine the importance, size or value of." The use of "indicates" in claims 1 and 9 and "assessment" in claim 14 thus requires some direct and positive correlation between the position of the cam in a crack as shown by the placement indicia, and the quality of the placement.

The grooves in Jardine's cams do not and cannot make this positive correlation. If, as the Examiner argues, the Jardine cams were capable of correlating quality, one might ask where along the curvature of the cams is the line between good quality placement and bad? Would it be at the first groove? The third groove? The tenth groove? There is of course no answer to these questions because (a) the grooves do not and were never meant to correlate to placement quality, and (b) the Inventors named in these patents never contemplated any device that would indicate placement quality. Insofar as the appearance of the gripping surfaces of the Jardine cams, there is no difference whatsoever between a cam in a fully extended position (as in Jardine's Fig. 4), and a fully retracted cam placement. The climber using a Jardine cam must rely solely on experience and subjective judgment to determine the quality of the placement and whether it is safe. The claimed invention provides a visual verification system that supplements the climber's experience and judgment.

The Examiner further argues that Jardine's gripping surfaces are visible from the side surface. That is true to a degree, depending upon the crack into which the cam is inserted, but no matter what the position of the cams relative to

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the rock surfaces, there is nothing on the prior art cams that in any way provides an indication of the quality of the placement in the rock. The "quality" of cam placement is described throughout the specification of the present invention; in a nutshell, the quality of the cam placement relates to the appropriateness of a specific cam for use in a specific crack. The ability of the claimed visible placement indicia to correlate to cam placement quality allows the climber to quickly assess whether the selected cam is of an appropriate size.

ii. There is No Motivation to Combine the References

Each of independent claims 1, 9 and 14 also requires that the indicia is capable of indicating unsafe placement quality. The Examiner cites the Kensey patent in arguing that it would have been obvious to use Kensey's teaching of a color coded plunger to indicate when cam placement is unsafe. While Kensey is an example of a tool that uses a color-coded safety indicator system, it does not provide any suggestion or motivation that would lead one of ordinary skill in the art to combine the references as suggested by the Examiner. Applicant does not disagree with the Examiner's position that the color red is associated with danger, yellow with caution, and green with safety; the specification states this position as well (see, e.g., specification, page 8, second paragraph). However, there is a huge gap between this general statement, Kensey's use of a color system, and any suggestion to provide an indicia system on a cam as claimed.

The Jardine patent does not address safety at all. Neither Jardine nor Kensey therefore provides any suggestion or motivation that would lead one skilled in the art to develop a visual placement system that allows the climber to visually verify the quality and safety of placement. While Kensey does disclose a color coding system, even if one were to borrow Kensey's color coding system and try to apply it to Jardine's cams, the claimed invention could not be derived because there are no indicia indicating quality. As noted, Jardine says nothing about what portion of the cam would be safe and what would portion be unsafe.

In this case there are two cam references (Watts and Jardine, both discussed above) that fail to teach all limitations of the claims, and fail to teach anything about the need for indicia for indicating safely, and one reference that

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does ostensibly teach a color coded safety marking. There is nothing in these references that provides any motivation that would lead one skilled in the art to which the invention pertains to make the combination. There must be something in the cited references that suggests the desirability of the claimed invention; the suggestion cannot be derived from the specification of the application. Although Kensey does teach a safety marking system, applicant does not argue that this element is new. Instead, there is simply no suggestion of the desirability of using a safety marking system in a climbing cam.

Even where two references may be amenable to being combined for purposes of making a rejection under § 103, an obviousness rejection cannot be sustained absent a suggestion in the prior art of the desirability of the combination. *See, e.g., In re Mills*, 916 F.2d 680 (Fed. Cir. 1990). In this case even if Watts or Jardine and Kensey are combined, there is no suggestion in the references that the invention defined in the independent claims would be desirable.

iii. There is No Reasonable Expectation of Success

There is no reasonable expectation that the invention defined in independent claims 1, 9 and 14 would be successful from the combination of Jardine with Kensey. As noted above, Jardine does not disclose or suggest the claimed placement indicia. As such, even when the references are combined there are claim limitations that are missing, and on this basis there can be no expectation of success.

Appellant submits that for the reasons discussed above, the criteria set forth above for establishing a *prima facie* case of obviousness under 35 USC § 103 have not been met with respect to the independent claims and, therefore, the rejection of claims 1, 9 and 14 over the combination of Jardine and Kensey, and the claims depending therefrom should be reversed.

II. THE DEPENDENT CLAIMS ARE ALLOWABLE

In addition to the dependent claims being allowable because they depend from allowable base claims, several dependent claims are allowable because they include limitations not taught or suggested by the prior art.

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Claims 3 and 20 require that the visible placement indicia be placed on a side surface of the cams. The Examiner argues that the grooves of Jardine are visible from the side. While Appellant points out that in many if not most instances where the Jardine cams are actually placed in rocks the grooves would not be visible, the grooves do not meet the limitation of indicia placed on a side surface.

Claims 4, 11, 12, 13 and 15 recite that the visible indicia comprises multiple color coded indicia. These claims are not obvious over the combination cited by the Examiner. Although Kensey describes color-coding schema for a medical instrument, it does not suggest the claimed multi-colored indicia correlating to quality of cam placement.

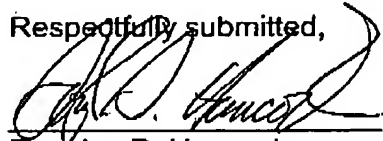
Claims 5, 6, 16 and 17 each require a graduated scale marking in which the graduations correlate to cam placement quality. There is nothing in any reference cited by the Examiner that shows a graduated scale at all.

As with the other claims, claims 7, 8, 12, 13 and 18-20 are rejected as obvious over Jardine with Kensey. For the reasons noted above, none of the references teach or suggest the color coding systems called out in these claims. Claims 8, 13 and 19 specify that a colored zone in the multi-color marking system correlates to a predetermined portion of the rock-contacting surface of the cam. The references do not suggest or teach such a claim.

d. Summary

In view of the foregoing, appellant respectfully requests reversal of all of the rejections.

Respectfully submitted,



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8. Claims Appendix

1. A placement indicator for use with a climbing cam having opposed cam members, comprising:

visible placement indicia placed on each of said opposed cam members, wherein said visible placement indicia indicates the quality of cam placement in a rock and includes indicia for indicating when cam placement is not safe.

3. The placement indicator according to claim 1 wherein each cam defines a rock-contacting surface and a side surface, and wherein the visible indicia are placed on the side surface.

4. The placement indicator according to claim 3 wherein the visible indicia further comprises a multiple color-coded marking in which the color of the indicia correlates to the quality of cam placement in the rock.

5. The placement indicator according to claim 3 wherein the visible indicia further comprises a graduated scale marking in which the scale graduations of the indicia correlate to the quality of cam placement in the rock.

6. The placement indicator according to claim 3 wherein the visible indicia further comprises a color-coded and graduated scale marking in which the markings correlate to the quality of cam placement in the rock.

7. The placement indicator according to claim 4 wherein the color-coded markings further comprise a red zone, and yellow zone and a green zone.

8. The placement indicator according to claim 7 wherein each colored zone correlates to a predetermined portion of the rock-contacting surface.

9. In a climbing cam having at least one pair of opposing arcuate cam members configured for contacting rock surfaces in a crack in a rock, the improvement comprising:

indicia on each of said cam members capable of indicating unsafe cam placement quality.

10. The climbing cam according to claim 9 wherein the opposing arcuate cam members are pivotally movable between a fully open position in which the cam members contact rock surfaces and a fully closed position in which the cam members contact rock surfaces, and wherein the indicia on each of said cam

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members defines a graduated placement quality scale extending from the fully open position to the fully closed position.

11. The climbing cam according to claim 9 wherein the indicia further comprises multiple color-coded indicia in which the color of the indicia correlates to the quality of cam placement in the crack.

12. The climbing cam according to claim 11 wherein the multiple color-coded markings further comprise a red zone, and yellow zone and a green zone.

13. The climbing cam according to claim 12 wherein each colored zone correlates to a predetermined portion of a rock-contacting surface of the cam members.

14. A visual placement indicator for a climbing cam of the type having opposed cams, comprising:

indicia means on said cams for providing a visual assessment of the quality of cam placement, said indicia means including visual indicators indicating unsafe cam placement.

15. The visual placement indicator according to claim 14 wherein the indicia means further comprises multi-color coding means for providing a visual indication of the quality of cam placement.

16. The visual placement indicator according to claim 14 wherein the indicia means further comprises a graduated scale for providing a visual indication of the quality of cam placement.

17. The visual placement indicator according to claim 14 wherein the indicia means further comprises a color-coded graduated scale for providing a visual indication of the quality of cam placement.

18. The visual placement indicator according to claim 15 in which the color coding means comprises plural color coded zones including a red zone, a yellow zone and a green zone.

19. The visual placement indicator according to claim 18 in which each cam defines a rock-contacting surface, and wherein each colored zone correlates to a predetermined portion of the rock-contacting surface.

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20. The visual placement indicator according to claim 19 wherein each cam further defines a cam side surface and wherein the colored zones are marked on the cam side surface.

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9. Evidence Appendix

None

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10. Related Proceedings Appendix

None